Replacement Sheet

OIPE JC146
DEC 0 2 2004
PATENT & TRADEMARK OFFICE

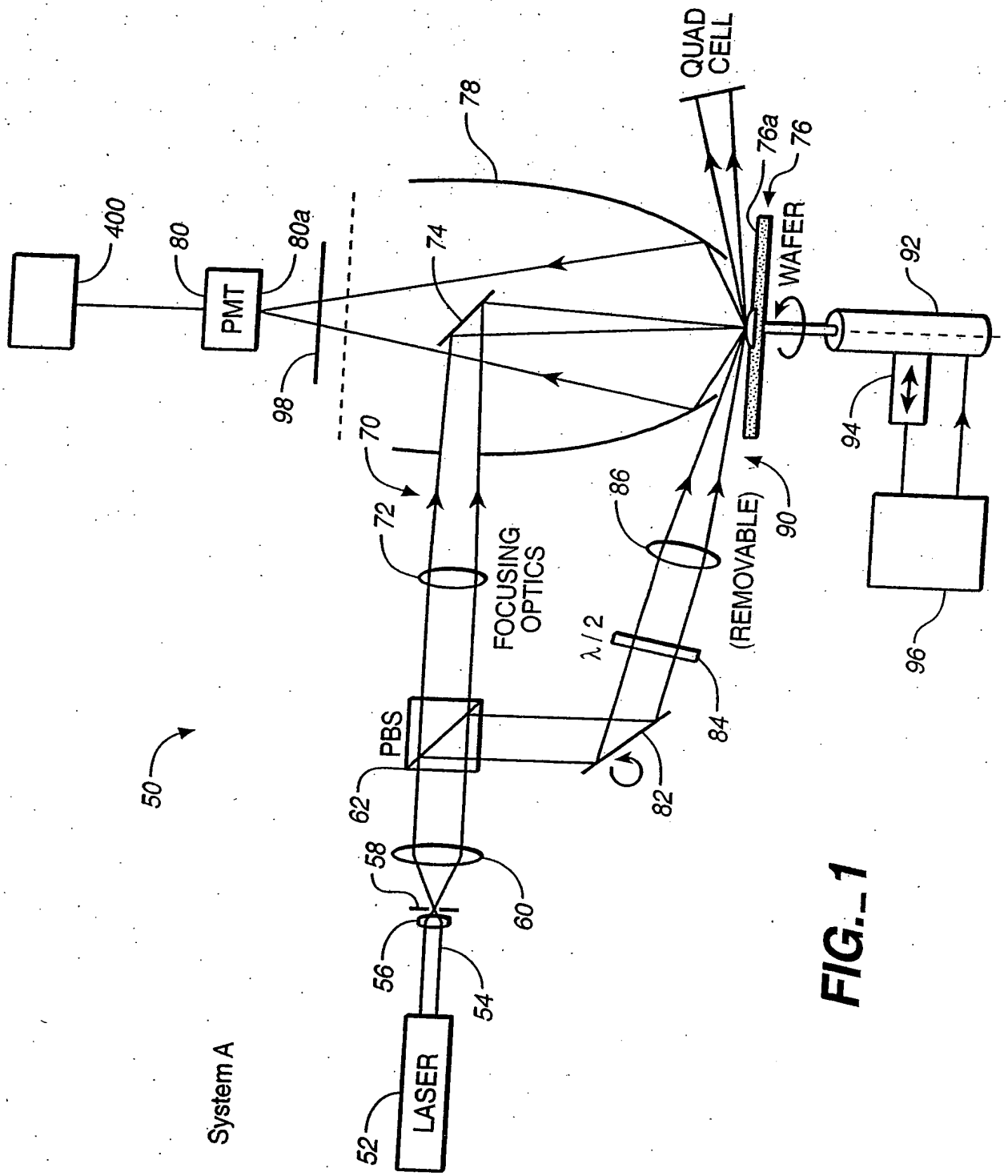
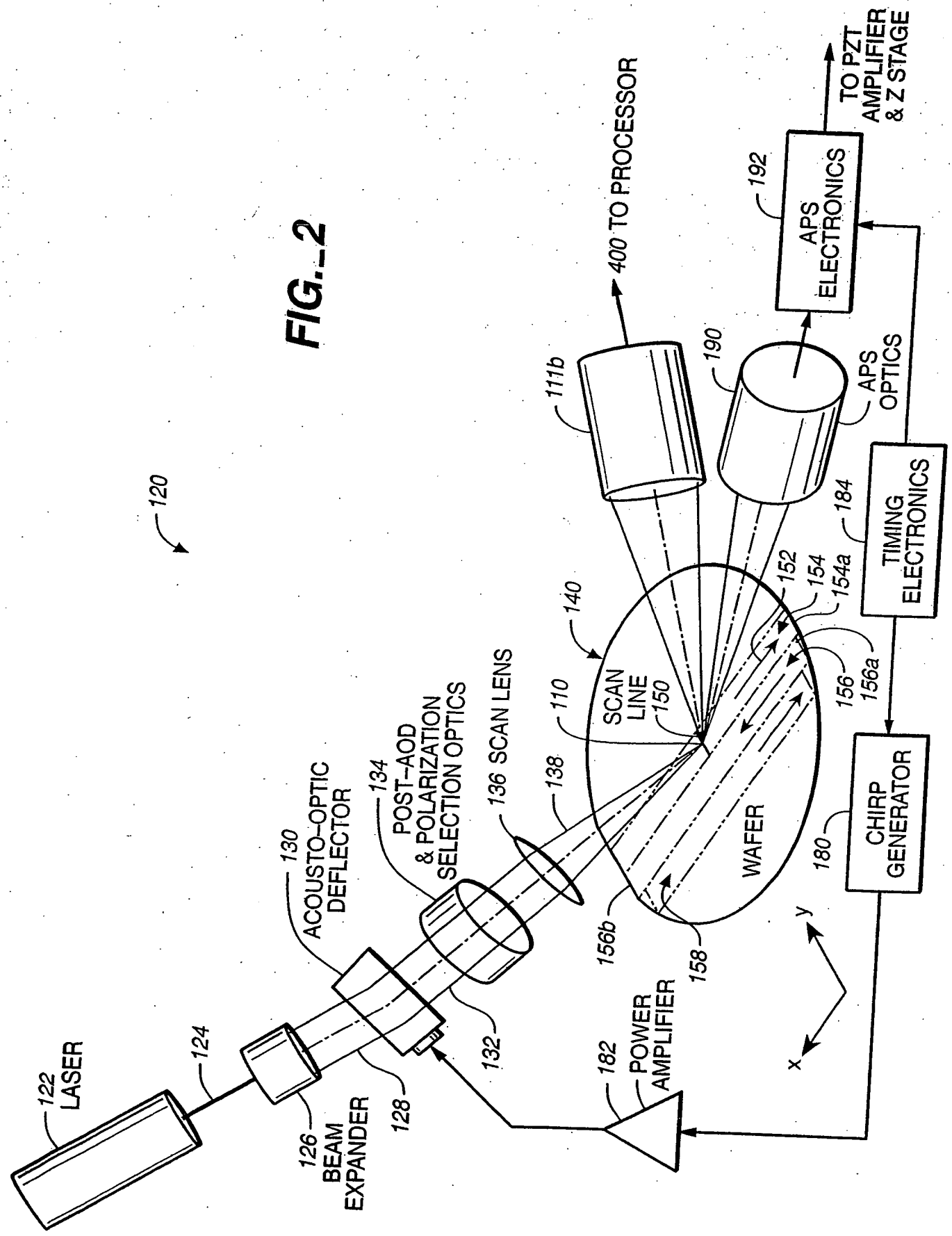
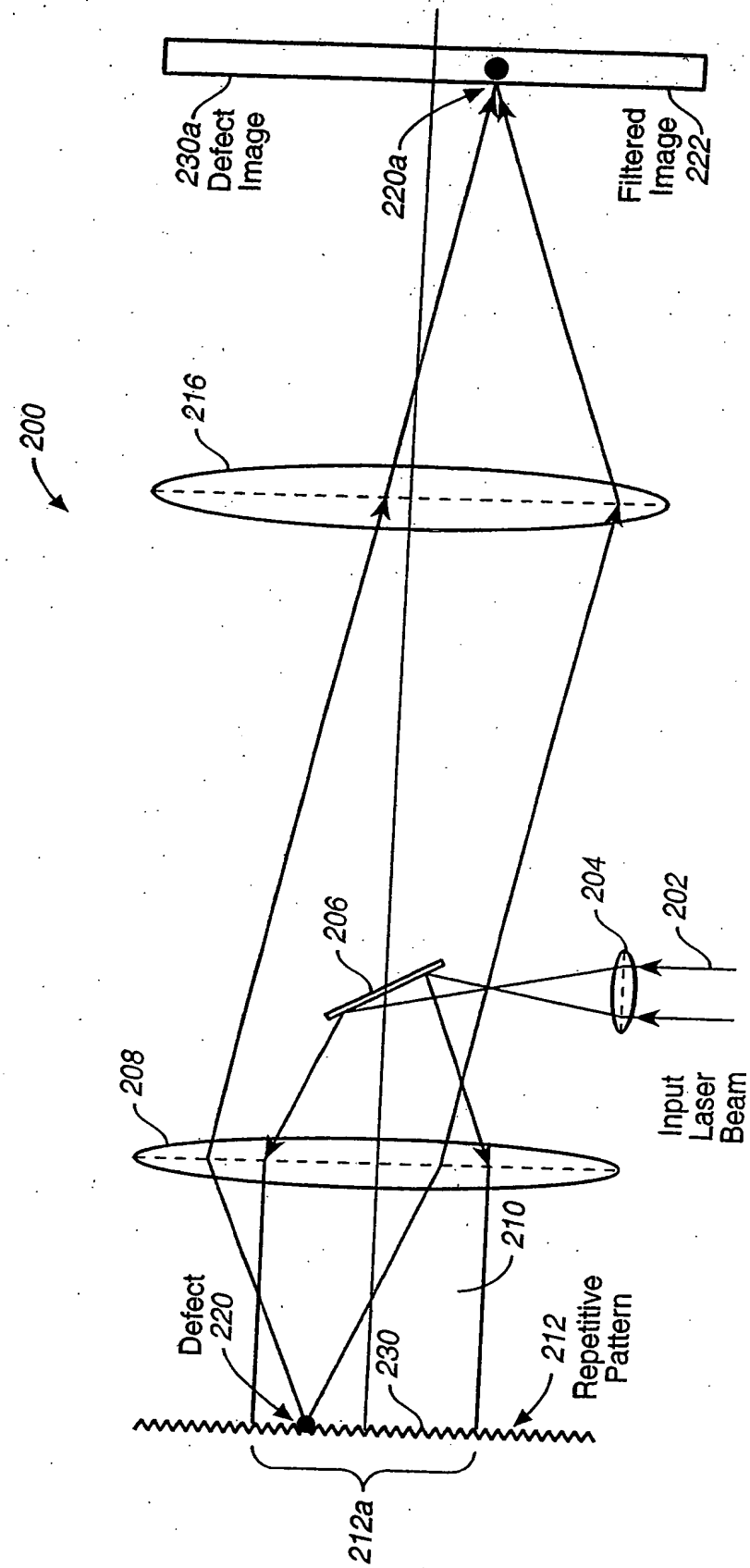


FIG._1

FIG._2


120
122 LASER
124
126 BEAM EXPANDER
128
130 ACOUSTO-OPTIC DEFLECTOR
132
134 POST-AOD & POLARIZATION SELECTION OPTICS
136 SCAN LENS
138
110
140
SCAN LINE 150
152
154
154a
156
156a
156b
158
WAFER
111b
400 TO PROCESSOR
190
APS OPTICS
192
APS ELECTRONICS
TO PZT AMPLIFIER & Z STAGE
184 TIMING ELECTRONICS
180 CHIRP GENERATOR
182 POWER AMPLIFIER
y
x



Optical Pattern Filtering Defect Detection

FIG._3

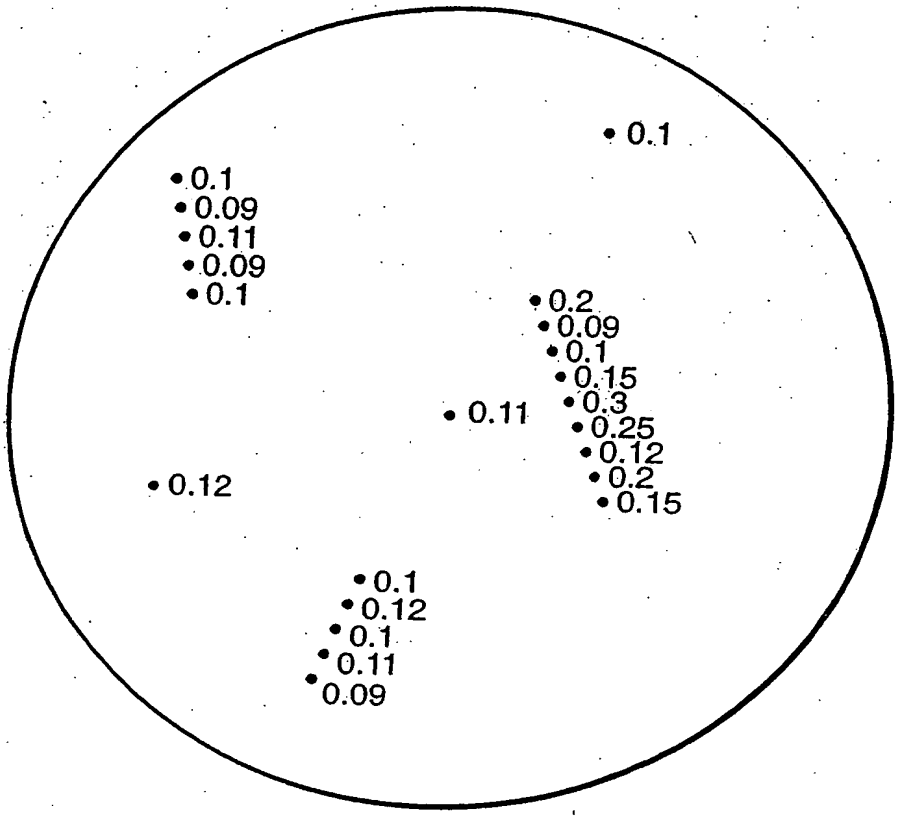


FIG._4 Simulated Distribution of Defects After a Scan. Size Indicated in Microns

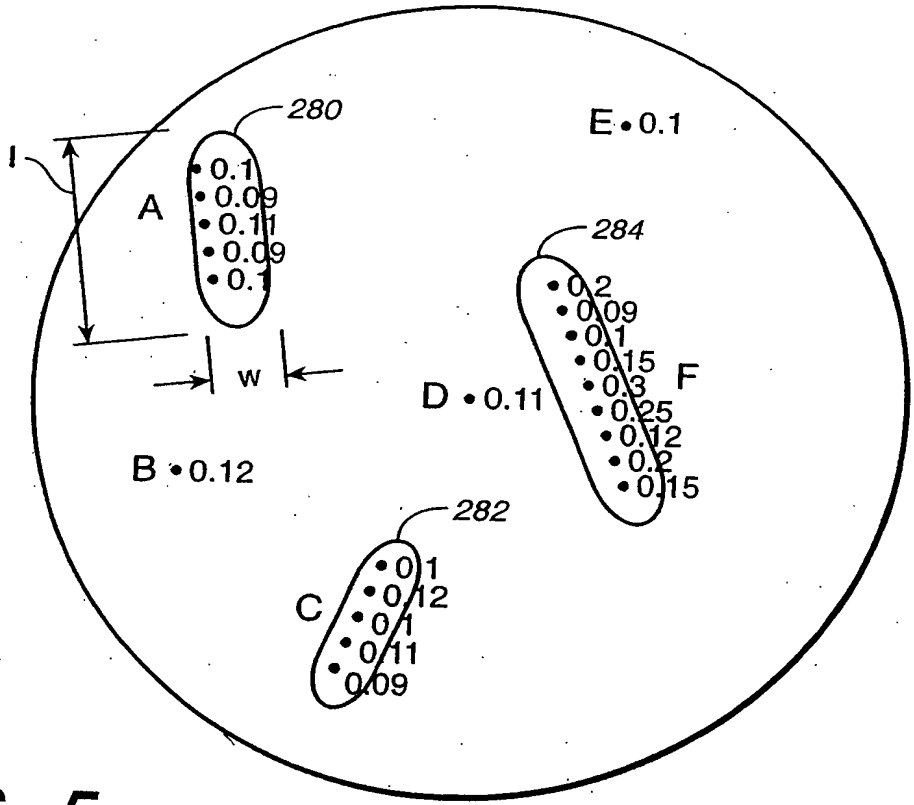
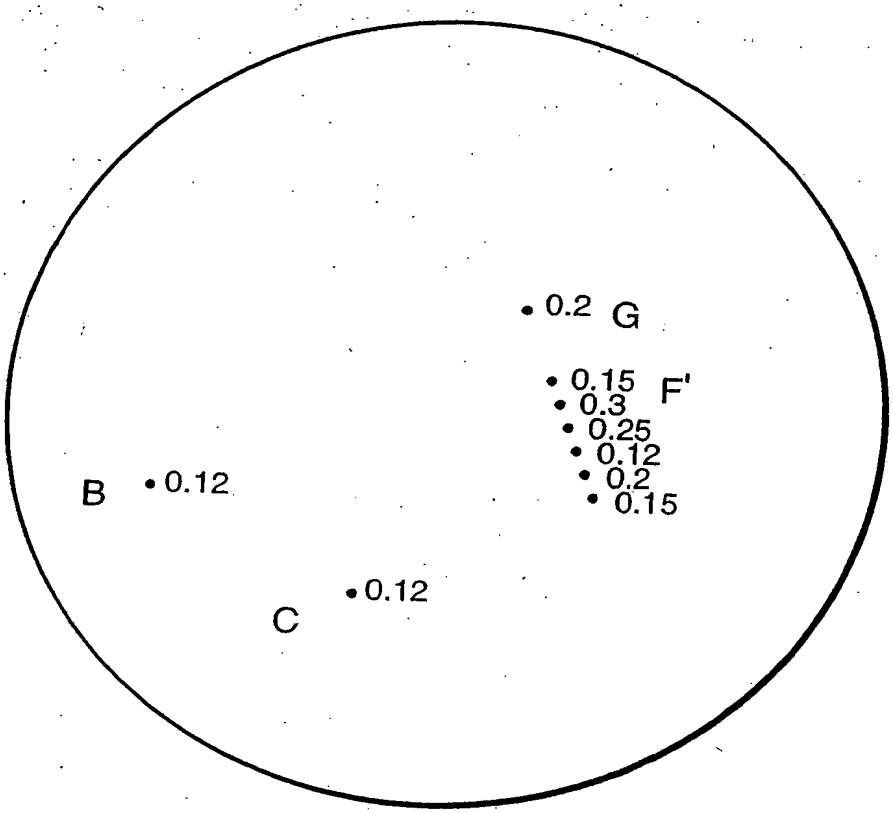


FIG._5 Initial Clustering in Microscratch Algorithm



Final Output of the Microscratch Algorithm

FIG._6

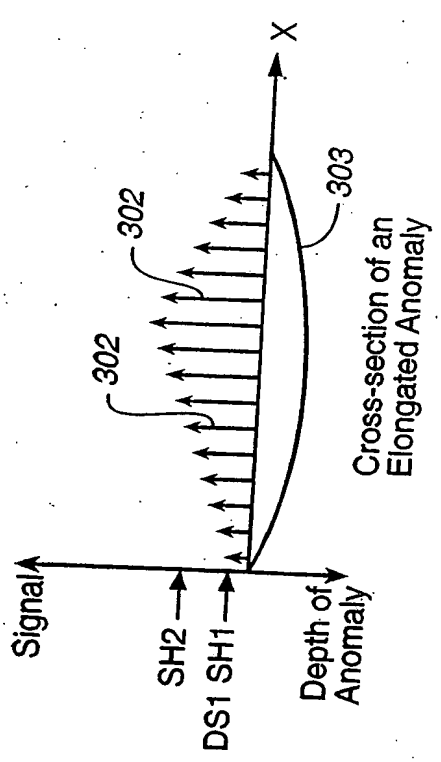


FIG._7A

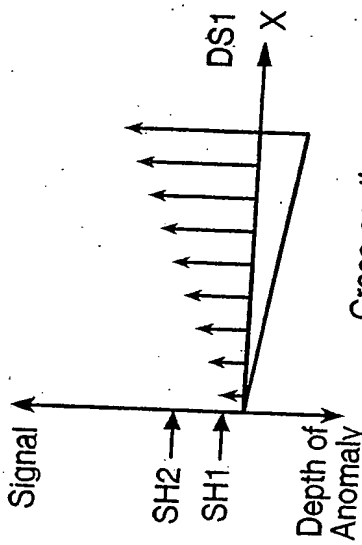


FIG._7B

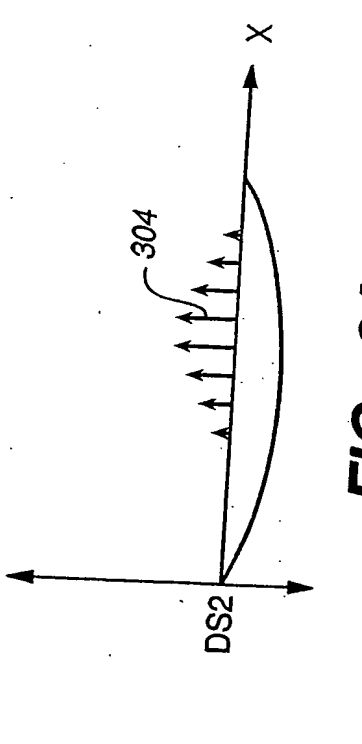


FIG._8A

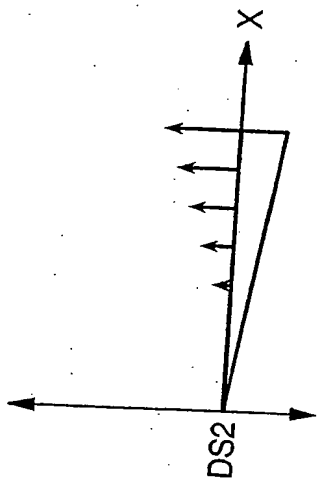


FIG._8B

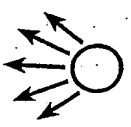


FIG._9

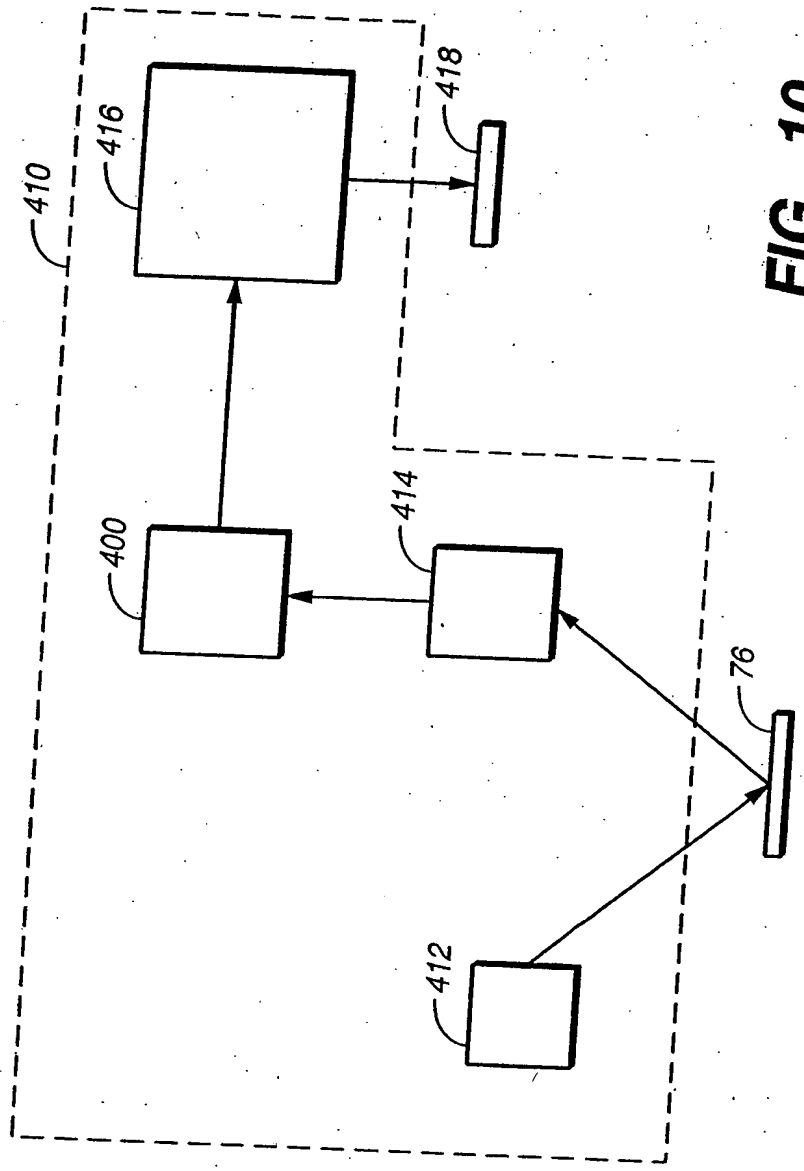


FIG._10

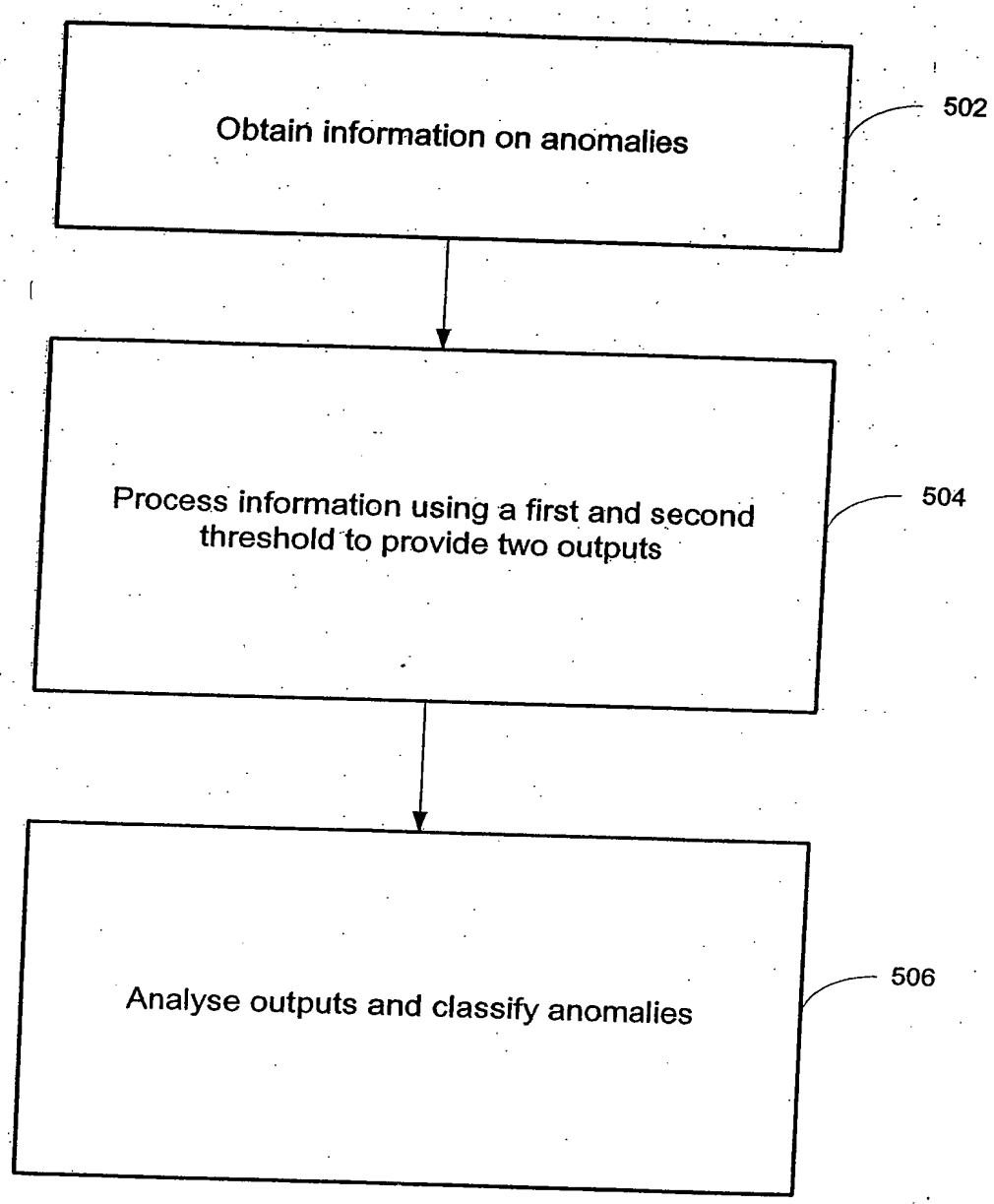

Obtain information on anomalies
502
Process information using a first and second threshold to provide two outputs
504
Analyse outputs and classify anomalies
506

FIG. 11